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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/589,464

06/07/2000

Samson Boodaghians

1999-0711

9622

7590

06/03/2004

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EXAMINER

NGUYEN, TOAN D

ART UNIT

PAPER NUMBER

2665

14

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/589,464

Applicant(s)

BOODAGHIANS, SAMSON

Examiner

Toan D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14, 16-19, 21-30, 35-38, 42, 45, 46, 55-60, 63, 64 and 67-76 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 15, 20, 31-34, 39-41, 43, 44, 47-54, 61, 62, 65, 66 and 77-79 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-7, 14, 16-17, 21-30, 46, 55-59, 63-64 and 67-75 are rejected under 35

U.S.C. 102(e) as being anticipated by Agrawal et al. (U.S. 6,636,484 B1).

For claims 1, Agrawal et al. disclose automatic generation of OAM cells from connection continuity detection, comprising:

establishing a bi-directional traffic trunk (figure 2, reference 10, col. 3 line 66 to col. 4 line 2); and

performing a loopback function on the established bi-directional traffic trunk (col. 5 lines 57-62).

For claims 2, 14 and 17, Agrawal et al. disclose evaluating at least one parameter of the established bi-directional traffic trunk using the performed loopback function (col. 6 line 66 to col. 7 line 8).

For claim 3, Agrawal et al. disclose activating the established bi-directional traffic trunk, when the evaluated parameter is any one of: (1) equivalent to a predetermined standard associated with the evaluated parameter and (2) exceeds the predetermined standard associated with the evaluated parameter (col. 4 lines 9-20).

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For claim 4, Agrawal et al. disclose performing at least one of: (1) re-establishing the bi-directional traffic trunk using a different explicit route and (2) providing notification, when the evaluated parameter is not equivalent to, and does not exceed the predetermined standard (col. 4 lines 16-20).

For claim 6, Agrawal et al. disclose wherein the evaluated parameter includes at least one of connectivity and delay (col. 7 lines 2-8).

For claim 7, Agrawal et al. disclose performing the loopback function for the activated bi-directional traffic trunk (col. 5 lines 57-62); and evaluating at least one parameter for the activated bi-directional traffic trunk using the performed loopback function (col. 6 line 66 to col. 7 line 8).

For claim 16, Agrawal et al. disclose automatic generation of OAM cells from connection continuity detection, comprising:

activating a bi-directional traffic trunk (figure 4, reference 410, col. 7 lines 64-65); and performing a loopback function on the activated bi-directional traffic trunk (figure 4, reference 430, col. 8 lines 2-6).

For claim 21, Agrawal et al. disclose wherein the at least one parameter includes at least one of connectivity, delay and other quality of service parameters (col. 7 lines 2-8).

For claim 22, Agrawal et al. disclose automatic generation of OAM cells from connection continuity detection, comprising:

an originating router (figure 2, reference 210) configured to transmit a packet downstream on a bi-directional traffic trunk (col. 3 line 66 to col. 4 line 2); and

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a loopback router (figure 5, reference 220a) configured to receive the packet and transmit the packet upstream towards the originating router on the bi-directional traffic trunk (figure 5, col. 6 lines 46-56).

For claims 23-24, Agrawal et al. disclose wherein the originating router receives the packet from the loopback router and evaluating at least one parameter of the established bi-directional traffic trunk using the packet (col. 6 lines 55-56 and col. 6 line 66 to col. 7 line 8).

For claims 25 and 29, Agrawal et al. disclose wherein the originating router performing at least one of: (1) re-establishing the bi-directional traffic trunk using a different explicit route and (2) providing notification, when the evaluated parameter is not equivalent to, and does not exceed the predetermined standard (col. 4 lines 16-20).

For claims 26 and 28, Agrawal et al. disclose wherein the originating router activates the established bi-directional traffic trunk, when the evaluated parameter is any one of: (1) equivalent to a predetermined standard associated with the evaluated parameter and (2) exceeds the predetermined standard associated with the evaluated parameter (col. 4 lines 9-20).

For claim 27, Agrawal et al. disclose wherein the parameter is evaluated for at least one of bi-directional traffic trunk (col. 6 line 66 to col. 7 line 8).

For claim 30, Agrawal et al. disclose wherein the evaluated parameter includes at least one of connectivity and delay (col. 7 lines 2-8).

For claim 46, Agrawal et al. disclose automatic generation of OAM cells from connection continuity detection, comprising:

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a plurality of ports (figure 3, input and output ports), one port of the plurality of ports receiving a packet traveling downstream on a bi-directional traffic trunk (figure 3, col. 4 lines 25-32); and

processing circuitry (figure 3, reference 310) processing the packet and forwarding the packet to a selected port of the plurality of ports for transmission to a next hop upstream on the bi-directional traffic trunk (col. 7 lines 4-6 and col. 7 lines 8-14).

For claim 55, Agrawal et al. disclose automatic generation of OAM cells from connection continuity detection, comprising:

constructing a packet at a router (figure 6, col. 5 lines 57-64 and col. 6 lines 2-5);
transmitting the packet downstream on a bi-directional traffic trunk from the router
constructing the packet (figure 5, col. 6 lines 24-35);
receiving the packet at a router (figure 5, reference 220a, col. 6 lines 35-45);
determining whether to perform a loopback procedure at the router receiving the packet (figure 5, reference 220a, col. 6 lines 46-54).

For claim 56, Agrawal et al. disclose identifying the received packet as a loopback packet (col. 6 lines 36-37).

For claim 57, Agrawal et al. disclose processing the received packet in accordance with a command in the packet, when the packet is determined to be a loopback (col. 6 lines 38-45).

For claim 58, Agrawal et al. disclose wherein the command is associated with at least one parameter of the bi-directional traffic trunk (col. 6 line 66 to col. 7 line 3).

For claim 59, Agrawal et al. disclose wherein the at least one parameter includes at least one of connectivity, delay, and other quality of service parameters (col. 7 lines 1-8).

For claims 63-64 and 67-68, Agrawal et al. disclose wherein the step of determining whether to perform a loopback procedure further includes a step of determining whether the received packet is a loopback packet (col. 6 lines 35-59).

For claim 69, Agrawal et al. disclose automatic generation of OAM cells from connection continuity detection, comprising:

a bi-directional traffic trunk (col. 3 lines 24-26);

an originating router (figure 2, reference 210) constructing a packet and transmitting a packet downstream on the bi-directional traffic trunk (col. 3 line 66 to col. 4 line 2); and

a receiving router receiving the packet and determining whether the receiving router is a loopback router for the received packet (figure 5, reference 220a, col. 6 lines 46-54).

For claim 70, Agrawal et al. disclose wherein the receiving router performs a loopback procedure when the receiving router is the loopback router for the received packet (col. 6 lines 40-59).

For claim 71, Agrawal et al. disclose wherein the receiving router processes the received packet in accordance with a command in the packet (col. 6 lines 38-59).

For claim 72, Agrawal et al. disclose wherein the command is associated with at least one parameter of the bi-directional traffic trunk (col. 6 line 66 to col. 7 line 3).

For claim 73, Agrawal et al. disclose wherein the at least one parameter includes at least one of connectivity, delay, and other quality of service parameters (col. 7 lines 1-8).

For claim 74, Agrawal et al. disclose wherein the receiving router transmits the received packet to a next hop upstream, towards the originating router, when the receiving router is the loopback router for the received packet (figure 5, col. 6 lines 24-25 and col. 6 lines 46-59).

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For claim 75, Agrawal et al. disclose wherein the receiving router transmits the received packet to a next hop downstream on the bi-directional traffic trunk when the receiving router is not the loopback router for the received packet (col. 6 lines 24-27).

3. Claims 35 is rejected under 35 U.S.C. 102(e) as being anticipated by Kirby (U.S. 6,647,208 B1).

For claim 35, Kirby discloses hybrid electronic/optical switch system, comprising:
receiving a packet travelling downstream on a bi-directional traffic trunk (figure 1, reference 110, col. 9 lines 31-33 and col. 11 lines 6-8); and

transmitting the received packet upstream on the bi-directional traffic trunk (col. 11 lines 13-15), wherein the bi-directional traffic trunk is in a multi-protocol label switching network (col. 10 lines 60-62).

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (U.S. 6,636,484 B1) in view of Huscroft et al. (U.S. 5,889,778).

For claim 5, Agrawal et al. disclose further including a step of:

when the evaluated parameter is any one of: (1) equivalent to a predetermined standard associated with the evaluated parameter and (2) exceeds the predetermined standard associated with the evaluated parameter (col. 4 lines 9-16). However, Agrawal et al. does not disclose deactivating the loopback procedure. In an analogous art, Huscroft et al. disclose deactivating the loopback procedure (col. 6 lines 3-4). One skilled in the art would have recognized activation/deactivation cells to use the teachings of Huscroft et al. in the system of Agrawal et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the activation/deactivation cells as taught by Huscroft et al. in Agrawal et al.'s

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system with the motivation being to implement the handshaking required to initiate or cease performance monitoring or continuity check processes (col. 6 lines 5-6).

5. Claims 8-10 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (U.S. 6,636,484 B1) in view of Nagata et al. (U.S. 6,181,680 B1).

For claims 8 and 18, Agrawal et al. disclose wherein the loopback function for the activated bi-directional traffic trunk (col. 5 lines 57-62), and the evaluated parameter for the activated bidirectional traffic trunk (col. 6 line 66 to col. 7 line 8). However, Agrawal et al. does not disclose loopback function is performed periodically. In an analogous art, Nagata et al. disclose loopback function is performed periodically (Abstract lines 5-6). One skilled in the art would have recognized a loopback test performed periodically to use the teachings of Nagata et al. in the system of Agrawal et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the loopback test performed periodically as taught by Nagata et al. in Agrawal et al.'s system with the motivation being to provide a continuity test (Abstract lines 2-4).

For claims 9 and 19, Agrawal et al. disclose performing at least one of: (1) re-establishing the bi-directional traffic trunk using a different explicit route and (2) providing notification, when the evaluated parameter is not equivalent to, and does not exceed the predetermined standard (col. 4 lines 16-18).

For claim 10, Agrawal et al. disclose wherein the evaluated parameter includes at least one of connectivity and delay (col. 7 lines 2-8).

6. Claims 11, 60 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (U.S. 6,636,484 B1) in view of Tappan (U.S. 6,473,421 B1).

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For claims 11, 60 and 76, Agrawal et al. disclose selecting a router in a path traversed by the bi-directional traffic trunk (figure 3, col. 4 lines 28-31); and

activating a loopback procedure at the router (col. 5 lines 56-58). However, Agrawal et al. does not disclose a label switching router. In an analogous art, Tappan discloses a label switching router (col. 11 line 18-19). Tappan discloses wherein the router constructing the packet and the router receiving the packet are label switching routers (col. 3 lines 23-24 as set forth in claims 60 and 76).

One skilled in the art would have recognized a label switching router to use the teachings of Tappan in the system of Agrawal et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the label switching router as taught by Tappan in Agrawal et al.'s with the motivation being contained ATM-cell virtual-channel indicator field (col. 11 lines 19-20).

7. Claims 36-38, 42 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirby (U.S. 6,647,208 B1) in view of Chuah et al. (U.S. 6,735,19 B1).

For claims 36-38, 42 and 45, Kirby does not disclose a step of identifying the incoming label of the received packet. In an analogous art, Chuah et al. disclose a step of identifying the incoming label of the received packet (reference 4, col. 10 lines 22-30). Chuah et al. disclose further a step of replacing the identified incoming label with an incoming label corresponding to a received packet traveling upstream on the bi-directional traffic trunk (figure 5, col. 6 lines 48-49 as set forth in claims 37 and 38); wherein the step of receiving a packet further includes receiving the packet at a label switching router, and the receiving label switching router is any one of a label edge router and an intermediate switching router (figure 4, references LSR1 -

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LSR-8, col. 6 lines 8-10 as set forth in claim 42); wherein the bi-directional traffic trunk is in a multi-protocol label switching network (col. 6 lines 31-32 as set forth in claim 45).

One skilled in the art would have recognized a step of identifying the incoming label of the received packet to use the teachings of Chuah et al. in the system of Kirby. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the step of identifying the incoming label of the received packet as taught by Chuah et al. in Kirby's system with the motivation being to improve performance in that available bandwidth is better utilized while concurrently allowing for easily merging and splitting packet flow traffic (col. 9 lines 28-30).

Allowable Subject Matter

8. Claims 12-13, 15, 20, 31-34, 39-41, 43-44, 47-54, 61-62, 65-66 and 77-80 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1-79 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

TN
T.N.



STEVEN NGUYEN
PRIMARY EXAMINER